

The opinion in support of the decision being entered today
is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT ANDRE, ALAIN PORTE,
and HERVE BATARD

Appeal 2007-0886
Application 09/914,181
Technology Center 1700

Decided: June 1, 2007

Before CATHERINE Q. TIMM, JEFFREY T. SMITH, and
LINDA M. GAUDETTE, *Administrative Patent Judges*.

GAUDETTE, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the Examiner's final rejection of claims 9-16. The final rejection of pending claims 17 and 18 has not been appealed (Br. 1). We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b) (2006).

We affirm.

Appellants' invention relates to a process for producing an acoustical attenuating panel for use, for example, in the attenuation of noise arising from aircraft turbo motors (Specification 1:5-10). The panel has four main parts positioned in the following order: a layer with structural properties, a layer with acoustical properties, a cellular structure and a reflector (Br. 2). The first two layers form a single sheet after polymerization and are referred to collectively as the "acoustically resistive layer."

Independent claim 9 is illustrative of the invention:

9. Process for the production of an acoustical attenuating panel comprising a cellular structure covered on one side with a reflector and on the other side with an acoustically resistive layer with two components respectively with an acoustical property and with a structural property, which process comprises the following steps:

- emplacing on a mold of a shape appropriate to the panel to be obtained, a layer with structural properties, constituted by filaments pre-impregnated with a thermoplastic or thermosetting resin, by draping, winding or wrapping said filaments while spacing the latter, such that said layer has a quantity of open surface of the order of 30% of the total surface of the exposed layer,

- emplacing from above the layer with structural properties, a layer with acoustical properties, constituted by a microporous cloth of mineral or organic fibers a thickness of the order of a tenth of that of the layer with structural properties;

- then emplacing the cellular structure and the reflector, and

- performing at least one step of baking in an autoclave at the end of at least one of the said steps of emplacing.

The Examiner relies on the following prior art references to show unpatentability:

| | | |
|------------------------------|-----------------|---------------|
| Hom | US 4,291,079 | Sep. 22, 1981 |
| Whitemore | US 4,292,356 | Sep. 29, 1981 |
| Daunt | US 4,377,736 | Mar. 22, 1983 |
| Newsam | US 4,504,346 | Mar. 12, 1985 |
| Beggs | US 4,539,244 | Sep. 3, 1985 |
| Adee | US 4,612,737 | Sep. 23, 1986 |
| Porte (EP '174) ¹ | EP 0,897,174 A1 | Feb. 17, 1999 |
| Weizeneker (EP '803) | EP 0,911,803 A2 | Apr. 28, 1999 |

The Examiner made the following rejections:

1. Claims 9, 11, 12, and 14 under 35 U.S.C § 103(a) as unpatentable over EP '174 in view of EP '803 and Newsam, and optionally further taken with any one of Hom, Whitemore, or Beggs.
2. Claims 10, 13, 15, and 16 under 35 U.S.C § 103(a) as unpatentable over Adee in view of Daunt, EP '803, and EP '174, and optionally further taken with any one of Hom, Whitemore, or Beggs.

ISSUE

The Examiner contends that it would have been *prima facie* obvious to reverse the order of process steps in EP '174 in view of the advantages disclosed in EP '803 to achieve Appellants' claimed process steps of placing a structural layer on a mold followed by placement of an acoustical layer. This reasoning is used in support of both rejections. Appellants contend that the Examiner has failed to establish that one of ordinary skill in the art would have been motivated to change the order of process steps in EP '174. This is Appellants' sole contention. The issue for us to decide is: Has the

¹ All references to EP '174 are to the English language equivalent, US Patent 6,268,038.

Examiner provided sufficient facts and reasons to establish that one of ordinary skill in the art at the time of the invention would have been motivated to combine the teachings of EP '174 and EP '803 in the manner claimed?

For the reasons discussed below, we answer this question in the affirmative. Accordingly, we affirm both grounds of rejection.

FINDINGS OF FACT

- 1) EP '803 describes a known acoustical attenuating panel which includes layers positioned in the following order: a woven wire mesh, a perforate face sheet, a honeycomb core and a solid backface sheet (EP '803 [0002]).
- 2) EP '803 states that a problem with this known structure, when used in a jet engine housing, is that "when mechanics work inside the inlet, or when certain foreign objects strike the liner, the exposed mesh skin is relatively easily susceptible to damage which, of course, must then be repaired to prevent ingestion of mesh structure into the engine" (EP '803 [0003]).
- 3) EP '803 is directed to solving this problem by constructing an acoustical attenuating panel which includes layers positioned in the following order: a perforate face sheet to be exposed to the exterior, a mesh structure, a honeycomb core, and a solid backface sheet (EP '803 [0009]).
- 4) EP '174 describes a method of making an acoustical attenuating panel in which an acoustical damping cloth is placed on a mold, followed by a filament layer, a honeycomb structure and a reflector. *See* US '038, 5:45-64.

5) EP ‘174 states that “the reinforcing filaments can be deposited with the same mold and that the acoustic damping cloth can be draped or wrapped on these filaments according to the use intended for the panel and according to its shape.” US ‘038, 6:56-59.

ANALYSIS AND CONCLUSIONS

Appellants contend that the present invention differs from the applied prior art in that the claimed process requires forming the layer with structural properties on a mold before any other layers are applied (Br. 2). Appellants state that “claims 9 and 10 . . . differ from each other immaterially as to the way in which this is done.” Therefore, Appellants present the same argument in traversing both grounds of rejection (Br. 2) (“[T]he claims stand or fall together.”).

Appellants concede that all of the claimed layers are known in the art in various combinations and arrangements (Br. 2). However, Appellants argue that the prior art fails to provide a motivation or suggestion to switch the process steps in EP ‘174 such that the layer with structural properties is placed on the mold prior to the layer with acoustical properties. Appellants’ arguments are directed solely to the Examiner’s findings and conclusions with respect to EP ‘174 and EP ‘803.

The Examiner found that EP ‘174 discloses a process for manufacturing an acoustical attenuating panel in which a layer with acoustical properties (an acoustical damping cloth) is placed on a mold, followed by a layer with structural properties (a filament layer), a cellular structure, and a reflector (Answer 15). The Examiner concluded that it would have been obvious to have reversed the order of the first two steps of the EP ‘174 process based on the disclosure in EP ‘803 that there are known

benefits in placing the layer with structural properties on the exterior of an acoustical attenuating panel (Answer 15). The Examiner notes, in particular, the advantage of eliminating possible break off and damage to the layer with acoustical properties (Answer 15, referencing EP '803, 1:32-40).

Appellants argue that

[t]he sequence of the process claimed on appeal, includes a step wherein the structural layer does not cover the acoustic layer, but wherein the structural layer is covered by the acoustic panel. This step is in direct contrast with what would be the normal practice apparent to one skilled in the art contemplating both EPO 897 174 and EPO 911 803.

(Reply 2-3). According to Appellants, “[n]either '174 nor '803 teaches or suggests to first put reinforcing filaments on a mold and then to put the acoustic liner above such filaments” (Br. 5).

As pointed out by the Examiner, Appellants' arguments fail to address the relevant inquiry in determining obviousness, which is what the *combined teachings* of the references would have suggested to one of ordinary skill in the art at the time of the invention (*See Answer 15*). *See In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). In our view, the Examiner has provided a reasonable basis to conclude that the prior art would have suggested to one of ordinary skill in the art that he should carry out the claimed process and would also have revealed a reasonable expectation of success in so doing.² *See In re Vaeck*, 947 F.2d 488, 493,

² Appellants are also directed to the language in EP '174 which states that the acoustic damping cloth can be draped or wrapped on the reinforcing filaments (FF 5) which appears to teach the steps of placing a layer with structural properties on a mold followed by a layer with acoustical properties.

20 USPQ2d 1438, 1442 (Fed. Cir. 1991). *See also, KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1742, 82 USPQ2d 1385, 1397 (2007) (“[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.”). Thus the burden was properly shifted to Appellants to come forward with appropriate evidence or argument in rebuttal.

Appellants have neither offered evidence of unexpected results nor have they provided any facts or reasons which indicate one of ordinary skill in the art would have been discouraged from combining the references in the manner proposed by the Examiner.

Accordingly, we find that the Examiner has established a *prima facie* showing of obviousness of the claimed invention which Appellants have failed to overcome.

ORDER

The rejection of claims 9, 11, 12, and 14 under 35 U.S.C § 103(a) as unpatentable over EP ‘174 in view of EP ‘803 and Newsam and optionally further taken with any one of Hom, Whitemore, or Beggs is affirmed.

The rejection of claims 10, 13, 15, and 16 under 35 U.S.C § 103(a) as unpatentable over Adee in view of Daunt, EP ‘803, and EP ‘174 and optionally further taken with any one of Hom, Whitemore, or Beggs is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(vi) (2006).

AFFIRMED

clj

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